1. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{5x+3} - \sqrt{-4x+4} = 0$$

A. $x_1 \in [-0.76, -0.54]$ and $x_2 \in [-0.48, 0.56]$

B. $x_1 \in [-0.76, -0.54]$ and $x_2 \in [0.51, 1.27]$

C. $x \in [-1.03, -0.63]$

D. $x \in [0.03, 0.38]$

E. All solutions lead to invalid or complex values in the equation.

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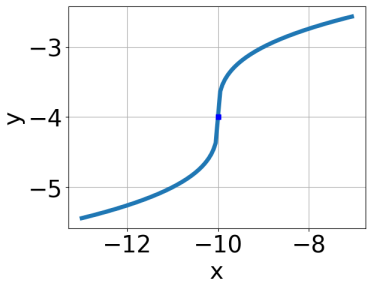
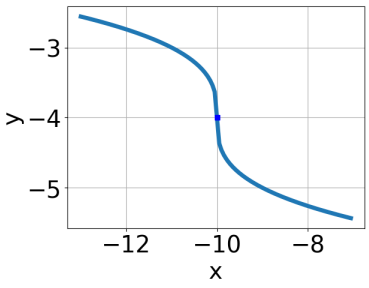
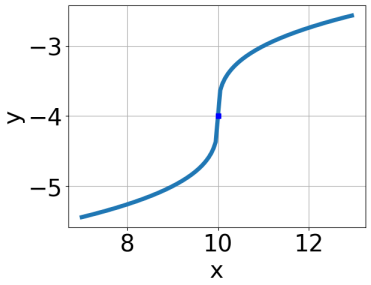
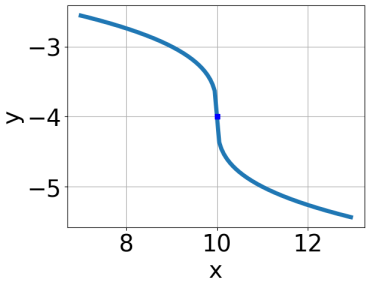
2. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x+10} - 4$$

A.


C.


B.


D.


E. None of the above.

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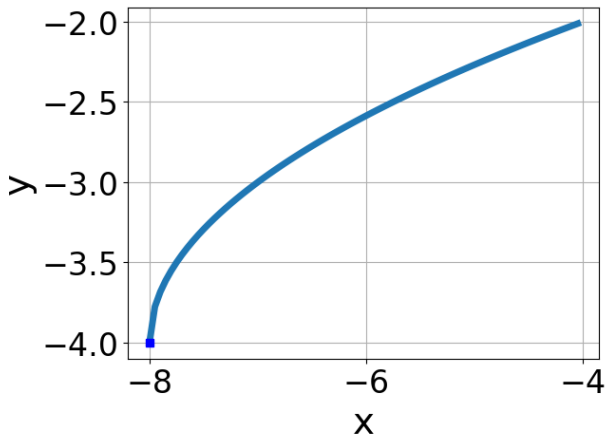
3. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt{x-8} - 4$

B. $f(x) = \sqrt{x+8} - 4$

C. $f(x) = -\sqrt{x+8} - 4$

D. $f(x) = \sqrt{x-8} - 4$

E. None of the above

---

4. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{-16x^2+36} - \sqrt{-14x} = 0$$

A. $x \in [1.9, 2.8]$

B. $x_1 \in [-1.23, -0.78]$ and $x_2 \in [-1, 3]$

C. $x \in [-1.23, -0.78]$

D. All solutions lead to invalid or complex values in the equation.

E. $x_1 \in [1.05, 1.16]$ and $x_2 \in [-1, 3]$

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5. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{6x-2} - \sqrt{-7x+9} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [0.38, 1.4]$

C. $x_1 \in [-0.07, 0.7]$ and $x_2 \in [1, 1.4]$

D. $x \in [-1.36, -0.06]$

E. $x_1 \in [-0.07, 0.7]$ and $x_2 \in [0.8, 1]$

---

6. What is the domain of the function below?

$$f(x) = \sqrt[7]{-7x - 9}$$

A. The domain is $[a, \infty)$, where $a \in [-0.81, 0.1]$

B. $(-\infty, \infty)$

C. The domain is $(-\infty, a]$, where $a \in [-1.24, 0.46]$

D. The domain is $(-\infty, a]$, where $a \in [-1.4, -0.78]$

E. The domain is $[a, \infty)$, where $a \in [-1.49, -1.01]$

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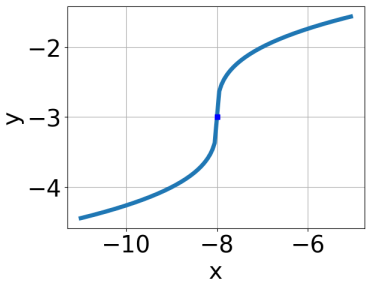
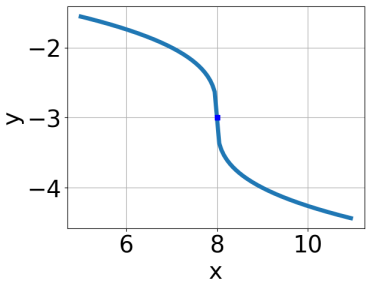
7. Choose the graph of the equation below.

$$f(x) = -\sqrt[3]{x + 8} - 3$$

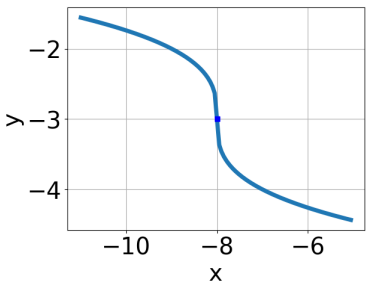
A.



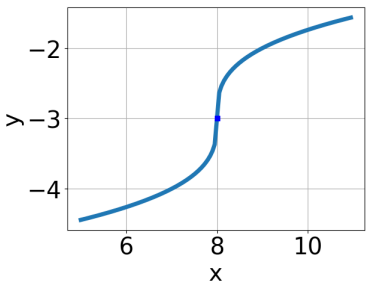
C.



B.

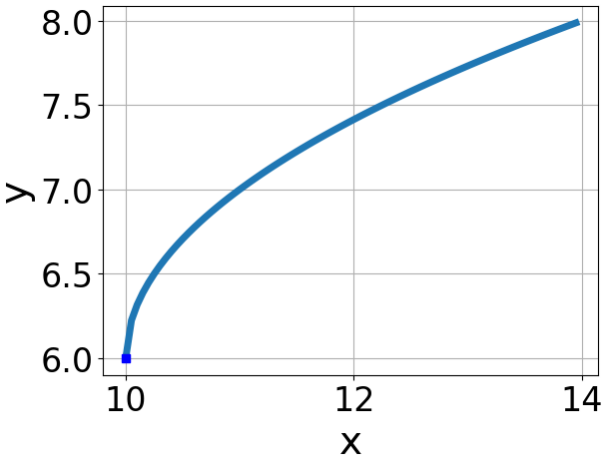


D.



E. None of the above.

8. Choose the equation of the function graphed below.



A. $f(x) = -\sqrt[3]{x-10}+6$

B. $f(x) = \sqrt[3]{x+10}+6$

C. $f(x) = \sqrt[3]{x-10}+6$

D. $f(x) = -\sqrt[3]{x+10}+6$

E. None of the above

9. Solve the radical equation below. Then, choose the interval(s) that the solution(s) belongs to.

$$\sqrt{40x^2+42} - \sqrt{-83x} = 0$$

A. All solutions lead to invalid or complex values in the equation.

B. $x \in [-1.17, -0.73]$

C. $x_1 \in [0.82, 1.04]$ and $x_2 \in [-0.8, 3.2]$

D. $x \in [-1.78, -1.01]$

E. $x_1 \in [-1.78, -1.01]$ and $x_2 \in [-1.87, 1.13]$

10. What is the domain of the function below?

$$f(x) = \sqrt[6]{-4x + 5}$$

A. $(-\infty, \infty)$

B. $(-\infty, a]$, where $a \in [0.82, 1.31]$

C. $(-\infty, a]$, where $a \in [0.55, 0.93]$

D. $[a, \infty)$, where $a \in [0.59, 1.19]$

E. $[a, \infty)$, where $a \in [1.1, 1.43]$